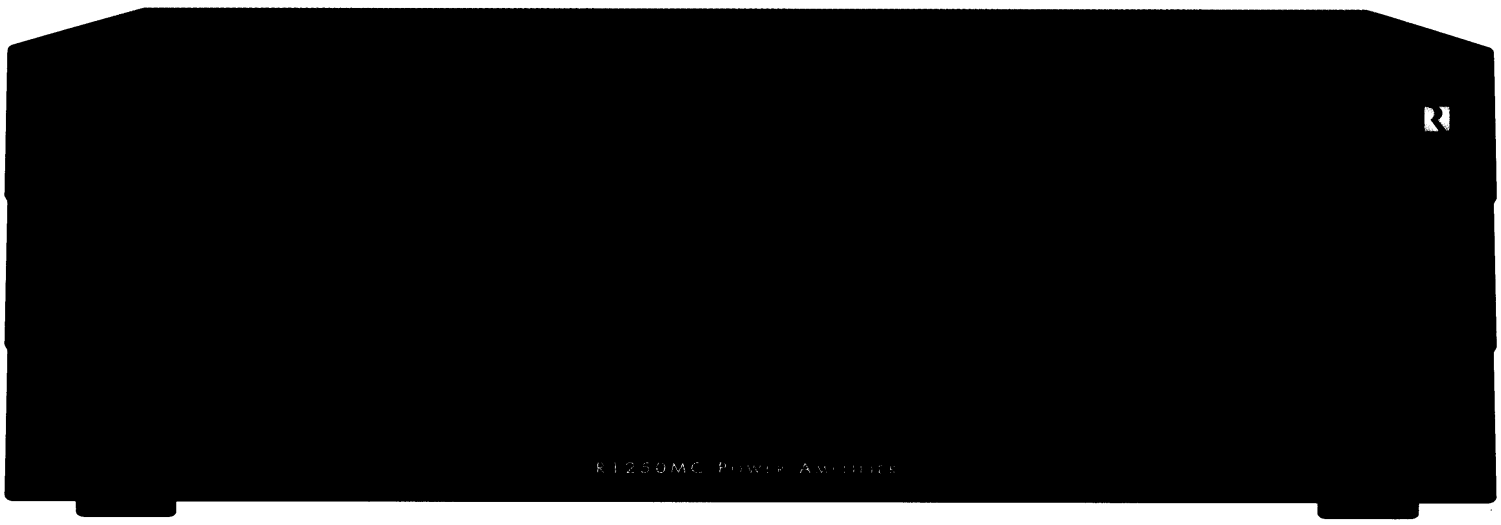
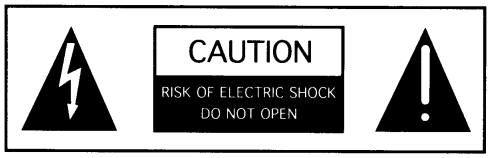
Russound®

R-Series
R1250MC
6-Zone, 12-Channel
Power Amplifier

User's Manual



IMPORTANT SAFEGUARDS



"WARNING" " TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE."

"CAUTION" " TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER - SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

SAFETY INSTRUCTIONS

1. Read Instructions - All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions - The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the appliance in the operating instructions should be adhered to.
4. Follow Instructions - All operating and user instructions should be followed.
5. Water and Moisture - Do not use this appliance near water, for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool. Do not expose the appliance to dripping or splashing, and do not place on the appliance objects filled with liquids such as vases. Do not touch the amplifier with wet hands. Do not handle the amplifier or power cord when your hands are wet or damp. If water or any other liquid enters the amplifier cabinet, take the amplifier to qualified service personnel for inspection.
6. Cleaning - The appliance should be cleaned only as recommended by the manufacturer. From time to time you should wipe off the front and side panels and the cabinet with a soft cloth. Do not use rough material, thinners, alcohol or other chemical solvents or cloths since this may damage the finish or remove the panel lettering.
7. Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings or, placed in a built - in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings. Place the unit in a well-ventilated location, leaving at least 2 inches (5 cm) of clearance on all sides, top and rear of unit for air flow. If ventilation is blocked, the unit may overheat and malfunction.
8. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
9. Grounding or Polarization - Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.
10. Power Cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, receptacles, and the point where they exit from the appliance.
11. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
12. Main Power Disconnect - The power switch is a single-pole switch. When the switch is in the "Off" position, the appliance is not completely disconnected from the main power. The main power plug is used as the disconnect device and shall remain readily operable. When installing the product, ensure that the plug is easily accessible.
13. Non-use Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
14. Attachments - Only use attachments/accessories specified by the manufacturer.
15. Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer. An appliance and cart combination should be moved with care. Quick stops, excessive force and uneven surfaces may cause the appliance and cart combination to overturn.

16. Wall or ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
17. Location of the Amplifier - Do not mount this unit under a kitchen cabinet. Do not expose the amplifier to direct sun light or heating units as the amplifier internal components' temperature may rise and shorten the life of the components. Avoid damp and dusty places.
18. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through the openings.
19. Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.
20. Damage Requiring Service - The appliance should be serviced by qualified service personnel when:
    A. The power - supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has been spilled into the appliance; or
    C. The appliance has been exposed to rain; or
    D. The appliance does not appear to operate normally; or
    E. The appliance has been dropped or the enclosure is damaged.

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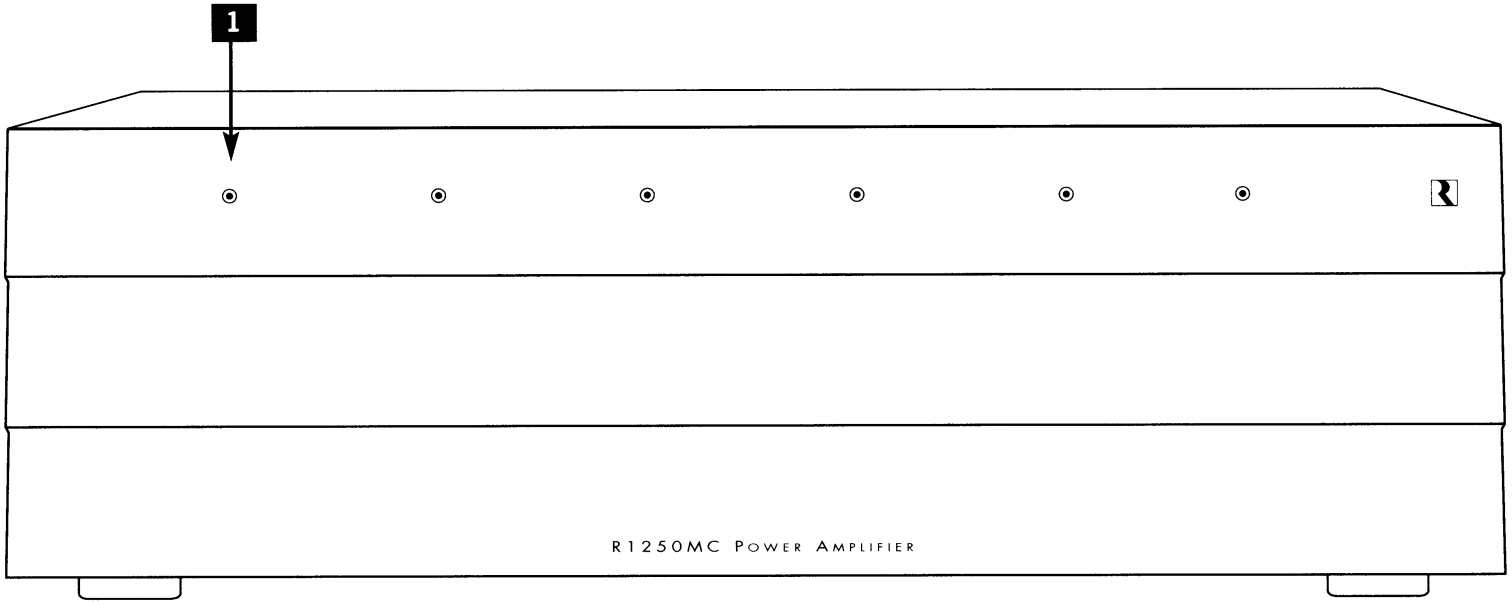
INTRODUCTION

The Russound R1250MC is a 12-channel power amplifier and is ideal for use as the main amplifier in home theater and distributed audio systems. The 12 channels are arranged in pairs to provide amplification for six stereo zones. The R1250MC provides an array of useful features such as bridge mode operation, independent zone triggering, bus inputs and multiple speaker outputs per zone to meet a wide variety of applications and configurations.

The R1250MC is rated at 50 watts per channel into 8 ohms and 80 watts per channel into 4 ohms. With the Stereo/Bridge Mono switch in the Bridge mode position, both channels in the zone are combined fora higher powered mono output. In bridged mode, the R1250MC provides 140 watts of power into a single 8-ohm load. All this power is backed by three high output toroidal transformers. Each amplifier output channel incorporates robust protection circuitry for safety and reliability under extreme circumstances.

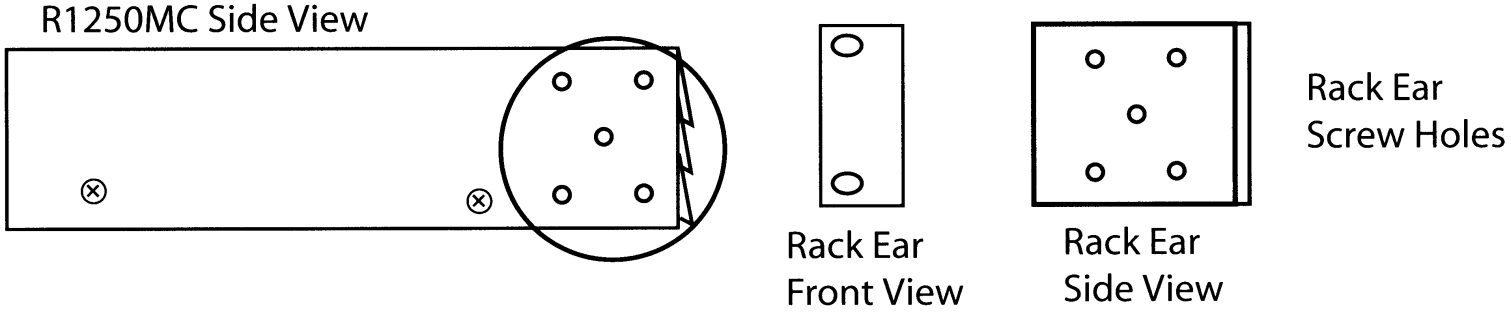
FRONT PANEL



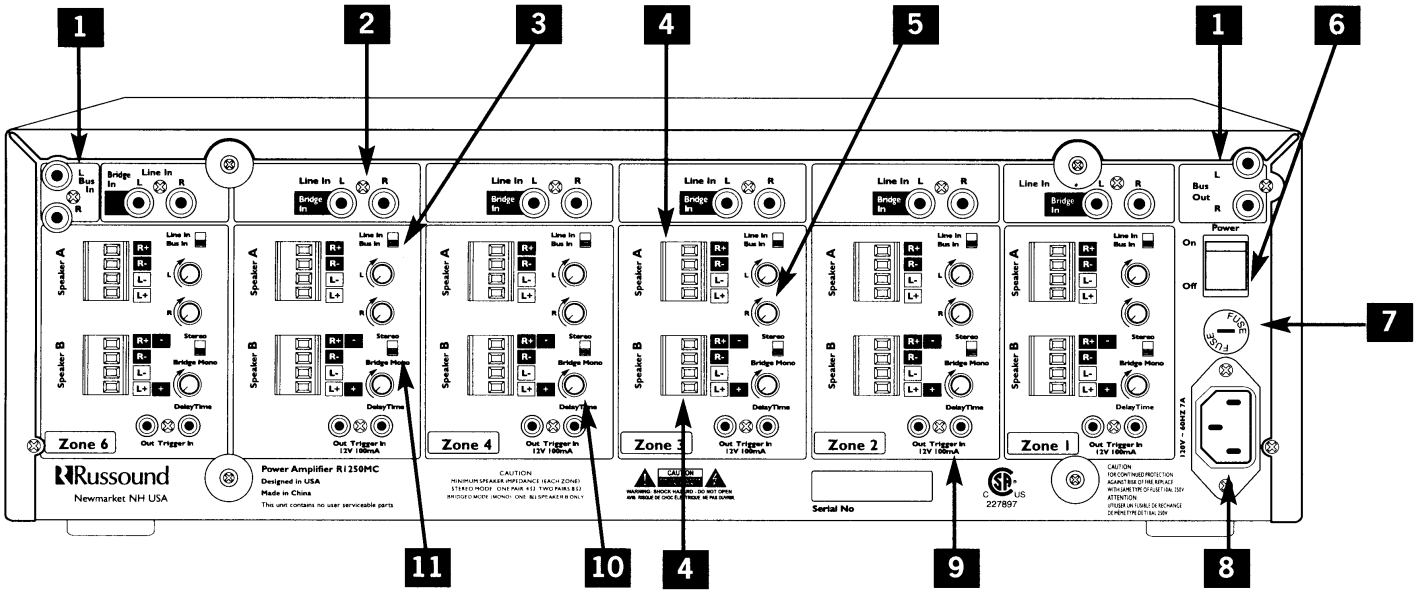
1 **Zone Indicator LEDs:** The six LEDs correspond to the six stereo zone amplifiers. The LED will illuminate red when the amplifier power is on and the zone is in standby. The LED will illuminate green when the zone is active.

RACK MOUNTING

The R1250MC amplifier can be rack mounted using the included rack-mount ears and hardware to attach the ears to the amplifier. The amplifier will take 3 rack spaces with the feet removed.



R1250MC AMPLIFIER



1 **Bus Input/Output:** The bus line input is an optional input that can be used to connect a single source to multiple zones. The bus line output is a passive passthrough of the bus input and can be used to daisy chain the source to other amplifiers in the system.

2 **Line Input:** The line audio input for each zone is a dedicated sensing input that will activate the zone when an audio signal from a source is present.

3 **Line/Bus Switch:** Sets the zone input to the Line audio input or the Bus input.

4 **Speaker Outputs:** The A and B speaker outputs are in parallel to the amplifier output. The minimum speaker impedance for stereo mode operation is 4 ohms for one pair and 8 ohms for two pairs of speakers. The minimum impedance for bridged mode operation is 8 ohms for Speaker B only.

5 **Gain Controls:** Left and Right gain controls independently adjust the sound level for each channel. When used in the bridged mode only the Left control is used.

6 **Power Switch:** Turns the amplifier on/off. This switch does not disconnect the main power feed from the amplifier; this requires that the power cord be unplugged from the outlet.

7 **Fuse Receptacle:** Holds a replaceable fuse for AC power input connection. Fuse rating for North America and Europe is T10AL 250V.

8 **AC Input:** The AC voltage input for the North American model is 120VAC at 60Hz (for the European model, 230VAC at 50Hz). This receptacle accepts a 3-prong IEC 320 type connector. A detachable 3-terminal power cord is included.

9 **12VDC Trigger In/Out:** The 12V Trigger In is used to activate the zone. The Trigger Out provides 100mA 12V max. This can be used to drive other 12V triggered devices. The delay and audio sensing are bypassed when the 12V trigger input is used.

10 **Delay Time:** Muting delay can be adjusted from about 0.5 minute to 4.5 minutes. When an audio signal is not present, the amplifier will automatically go into standby mode after the preset period of time. When set to maximum, the amplifier will stay active and not go into standby.

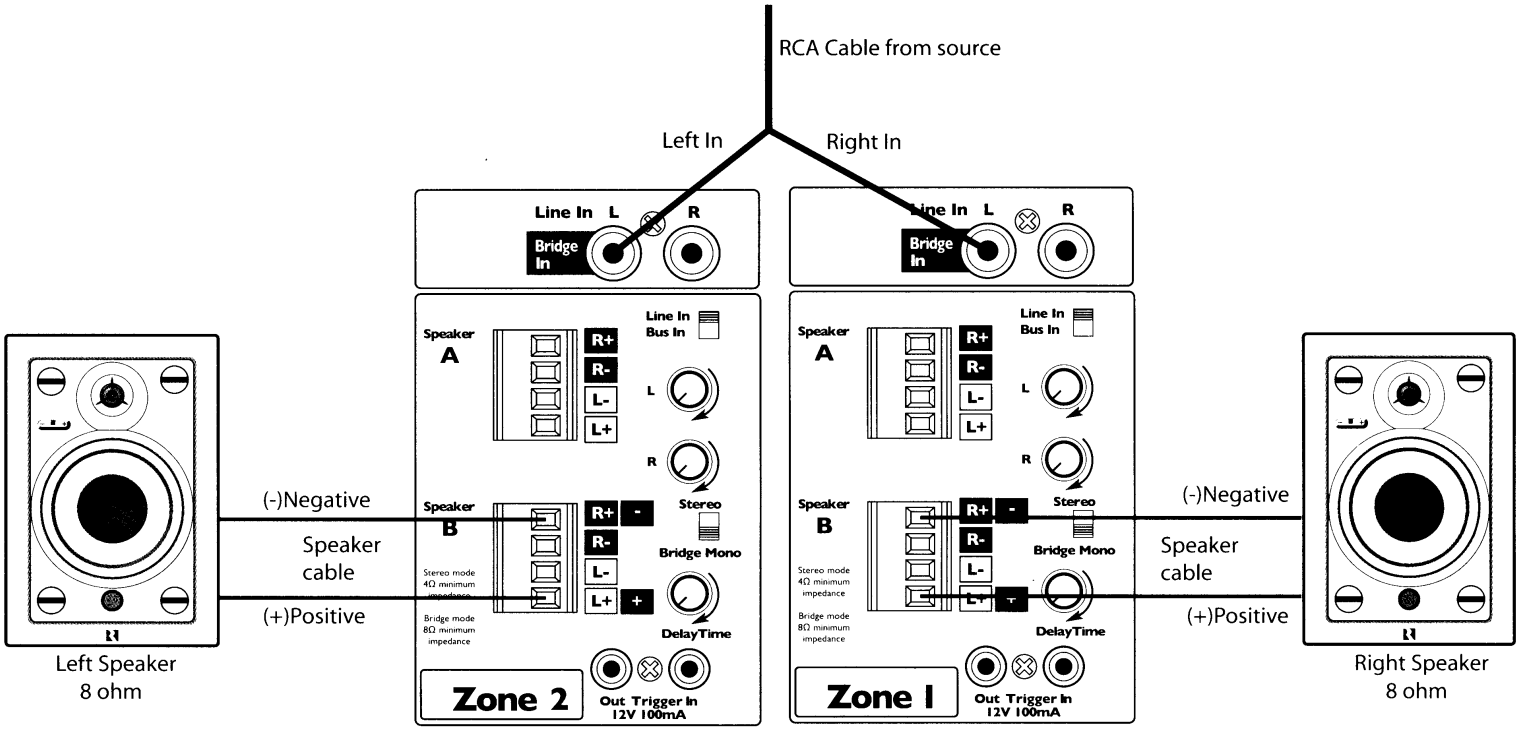
11 **Stereo/Bridge Mono Switch:** Sets each zone amplifier for stereo or bridged mono operation.

BRIDGED OPERATION

When the amplifier is in Bridged mode operation, both the left and right channels are combined for a higher power mono output.

For bridged amplifier operation, turn off the power to the amplifier and connect an 8-ohm minimum load to the Speaker B output.

Following the Bridge mode markings in red on the back of the amplifier: Connect the negative lead (-) of the speaker cable to the R+ terminal. Connect the positive lead (+) of the speaker cable to the L+ terminal. Set the Stereo/Bridge Mono switch to Bridge Mono, connect the Line In feed from a source to the Left Line In connection and restore power to the amplifier.



THERMAL PROTECTION

All Russound amplifiers are designed with special circuitry to safeguard the amplifier under a thermal overload condition. Thermal protection mode can only engage when the unit has been run at high volume for extended periods of time without adequate ventilation and/or when speaker impedances are below the minimum levels for the amplifier. If this fault occurs, turn off the amplifier, and check that the speaker impedance rating is above the minimum rating. Also check for adequate ventilation around the amplifier and make adjustments if necessary. Once the unit has cooled to safe operating temperatures, the amplifier may be powered back on.

PROTECTION CIRCUITRY

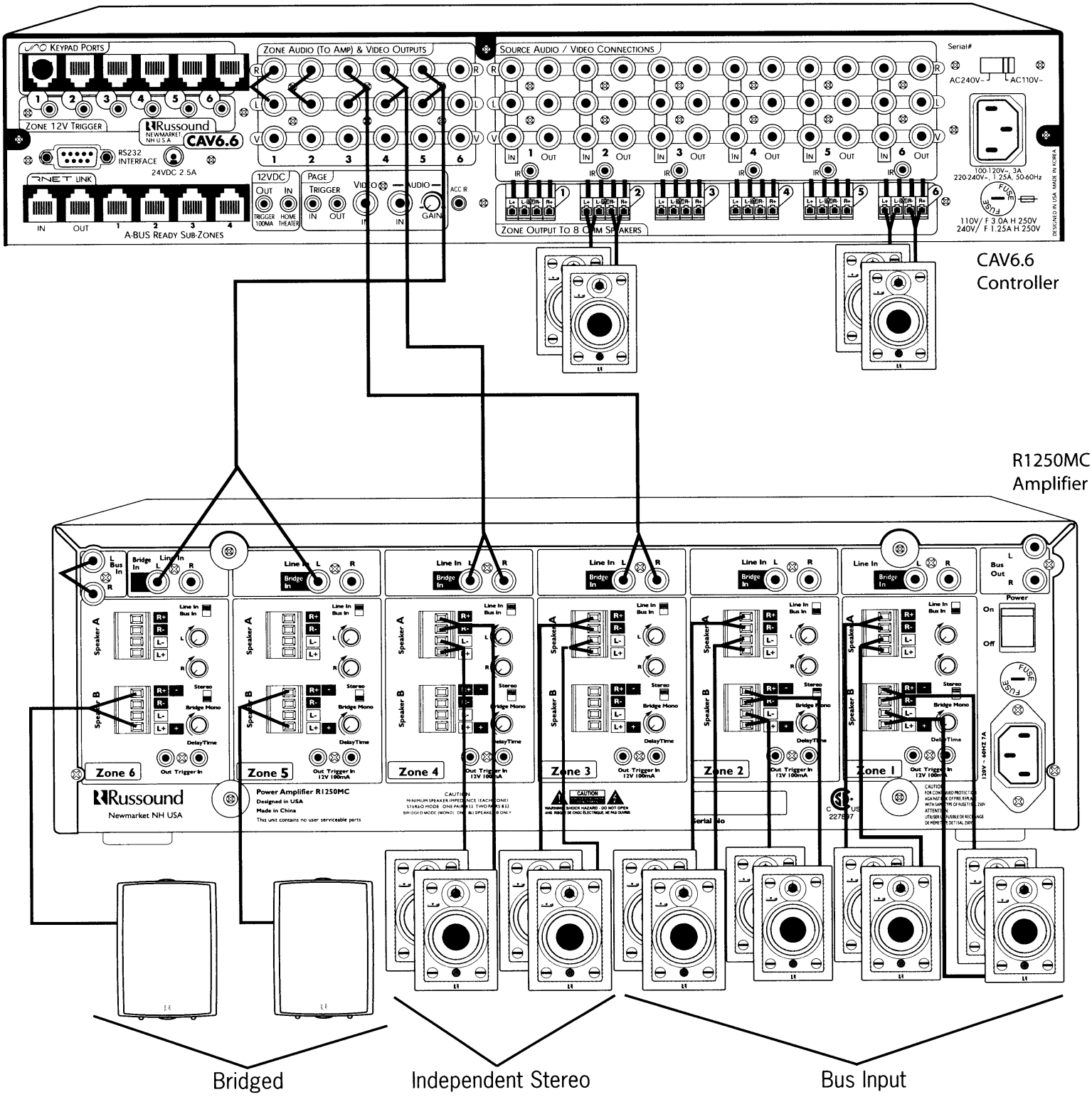
All Russound amplifiers are designed with special circuitry to safeguard the amplifier under a short-circuit condition. A faulty speaker can also cause a short circuit condition.

The front panel LED illuminates orange when the amplifier is in short circuit protection. If this fault condition occurs, turn off the amplifier and check speakers for short circuit conditions when appropriate.

POSSIBLE SYSTEM CONFIGURATION

The R1250MC can be configured as the main amplifier for an audio distribution system or home theater system. When used with an audio distribution preamp, each zone can independently drive one of several different sources by using each zone's individual line audio inputs, or a pair of zones can be bridged to create a higher powered zone.

When the R1250MC is used as a home theater amplifier, three zones can be bridged to provide high power for the front and center channels and the remaining zones can be used for the surround effects.



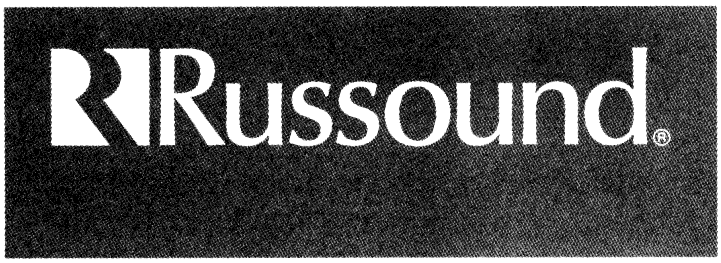
SPECIFICATIONS

Single Zone Maximum Output Power: (0.1% THD+N; f=1 kHz)	50W per channel, 2 channels at 8 ohms 80W per channel, 2 channels at 4 ohms 140W at 8 ohms, 2 channels bridged
All Zones Continuous Output Power:	35W per channel, 12 channels at 8 ohms 50W per channel, 12 channels at 4 ohms 100W at 8 ohms, each zone bridged
THD+N:	<0.05% from 20Hz to 20kHz
Signal-to-Noise Ratio:	>100dB
Frequency Response:	20Hz to 20KHz +/- 0.3dB
Input Sensitivity:	70mV for 1W at 8 ohms 500mV for 50W at 8 ohms
Input Impedance:	47kohms Line Input
Voltage Gain:	32dB
Delay Time:	0.5 to 4.5 minutes
Input Trigger:	12VDC 10 kohms
Output Trigger:	12VDC 100mA
Power Requirements:	***North American Model:*** 120VAC 60Hz 7A IEC 320 type connector with 3 terminal detachable power cord. Fuse Rating: T10AL 250V
Power Requirements:	***European Model:*** 230VAC 50Hz 4A IEC 320 type connector with 3 terminal detachable power cord. Fuse Rating: T10AL 250V
Dimensions:	17" W x 16.5"D x 5.875"H (43 x 42 x 15 cm)
Weight:	48.9lbs. (22.2kg)

WARRANTY

The Russound R1250MC is fully guaranteed for two (2) years from the date of purchase against all defects in materials and workmanship. During this period Russound will replace any defective parts and correct any defect in workmanship without charge for either parts or labor. For this warranty to apply, the unit must be installed and used according to its written instructions. If service is necessary, it must be performed by Russound. The unit must be returned to Russound at the owners expense and with prior written permission. Accidental damage and shipping damage are not considered defects under the terms of the warranty. Russound assumes no responsibility for defects resulting from abuse or servicing performed by an agency or person not specifically authorized in writing by Russound. Damage to or destruction of components due to improper use voids the warranty. In these cases the repair will be made at the owners expense. To return for repairs, the unit must be shipped to Russound at the owners expense, along with a note explaining the nature of the service required. Be sure to pack in a corrugated container with at least 3 inches of resilient material to protect the unit from damage in transit.

Russound sells products only through authorized Dealers and Distributors to ensure that customers obtain proper support and service. Any Russound product purchased from an unauthorized dealer or source, including retailers, mail order sellers and online sellers will not be honored or serviced under existing Russound warranty policy. Any sale of products by an unauthorized source or other manner not authorized by Russound shall void the warranty on the applicable product.



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